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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,313	02/21/2002	Sakan Iwashita	09792909-5343	8192

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EXAMINER

DINH, TUAN T

ART UNIT                      PAPER NUMBER

2827

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

10/080,313

IWASHITA ET AL.

Examiner

Art Unit

Tuan T Dinh

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 21 February 2002.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-14 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-14 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some \* c)  None of:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 12-14, it is confuse, the phrase of "wherein said projecting electrode...a specific projecting conductive member at specific position" is not understood. What does applicant meant of "specific projecting conductive member at specific position."

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Prior Art (submitted by applicant).

As best understood to claim 1, PA discloses an electronic parts mounting board (10) as shown in figures 3-4 comprising:

an electrode circuit base member (1) having an electrode (2A) on a surface of at least one side (see figure 1);

a projecting electrode (4A) bonded to said electrode (2A) of said electrode circuit base member (1);

an insulating member (5) provided on said electrode circuit base member (1) in such a manner as to insulate said electrode of said electrode circuit base member and said projecting electrode; and

a circuit electrode pattern (6A) provided on said insulating member (5) and said projecting electrode (4A);

wherein said projecting electrode (4A) is formed by forming a projecting conductive member of said circuit electrode pattern by plating, and pressing said projecting conductive member into said insulating member so as to pass through said insulating member and reach said electrode of said electrode circuit base member (see pages 5-7).

Regarding claim 2, PA discloses the board as shown in figures 3-4 wherein said electrode circuit base member (1) is a core member for an inner layer, which has a circuit electrode pattern (3A).

Regarding claim 4, PA discloses the board as shown in figures 3-4 wherein said circuit electrode pattern is formed by plating gold, nickel, copper, nickel, and gold in this order.

Regarding claim 5, PA discloses the board as shown in figures 3-4 wherein said projecting electrode is formed by selectively plating copper on said circuit electrode pattern.

Regarding claim 6, PA discloses the board as shown in figures 3-4 wherein said insulating member is made from a thermosetting resin having an adhesive property.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over PA in view of Jiang et al. (U. S. Patent 6,163,957).

Regarding claim 3, PA does not disclose said circuit electrode pattern and said projecting electrode are formed by electroplating.

Jiang shows a multiplayer laminated substrates comprising a pattern (12) and a projection electrode (20) formed by electroplating.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a pattern and a projection electrode formed by electroplating as taught by Jiang to employ the mounting board of PA in order to form signal trace and pads enabling very fine lines and pad features.

Regarding claims 7-14, the method steps are necessitated by the mounting board structure as it is disclosed by Prior Art.

**Conclusion**


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Scholz, Marrs, Murakami, and Gruber disclosed related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD  
January 27, 2003

  
DAVID L. TALBOTT  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800